

REMARKS/ARGUMENTS

The Office Action mailed September 24, 2003 has been reviewed and carefully considered. Claims 1-14 have been amended. Claims 1-15 are pending in this application, with claims 1 and 15 being the only independent claims. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed September 24, 2003, claim 1 stands rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson in view of Russell.

Claims 11, 13, and 14 stand rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson and Russell in further view of Eastlund.

Claim 2 stands rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson and Russell in further view of Edison.

Claims 3, 4, 6, 7, 9, and 10 stand rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson and Russell in further view of Yoshizawa.

Claim 5 stands rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson and Russell in further view of Hammer.

Claim 8 stands rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson and Russell and Yoshizawa in further view of Edison.

Claim 15 stands rejected under 35 U.S.C. §103 as unpatentable over Sigurdsson in view of Salansky.

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention relates to a method and apparatus for treating primary T cell mediated skin disorders. According to the invention, an optical radiation source emits in the wavelength range of 400-440 nm (see page

12, lines 7-8). Irradiance in the 300-400 nm range is less than 21% of the irradiance in the 400-440 nm range (see page 17, lines 1-13).

Independent claim 1 is rewritten as a method of administering therapeutic applications for the treatment of primary T cell mediated skin disorders including atopic dermatitis (neurodermatitis), cutaneous T cell lymphoma, lichen ruber, alopecia areata, systemic lupus erythematoses and psoriasis and cosmetic applications including cosmetic tanning. The claimed method includes using an irradiation device, wherein said irradiation device includes at least one optical radiation source which, on an area to be irradiated, is operatively arranged for generating an irradiance in a first wavelength range including 400nm to 440nm of greater than 60 mW/cm² and generating an irradiance in a second wavelength range including 300nm to 400nm of less than 21% of the irradiance in the first wavelength range and a cooling unit for cooling a surface of the area to be irradiated. Independent claim 15 also recites generating, on the area to be irradiated, "a first irradiance in a first wavelength range including 400nm to 440nm and a second irradiance in a second wavelength range including 300nm to 400nm, said first irradiance being at least 20 W/cm² on the area to be irradiated and said second irradiance being less than 21% of said first irradiance on the area to be irradiated".

Sigurdsson discloses the treatment of *Acne Vulgaris* with visible light. This reference does disclose that visible light reduces *Propionibacterium acnes* (an anaerobic bacterium), the bacteria which causes *Acne Vulgaris*. However, *Acne Vulgaris* is not a primary T cell mediated skin disorder.

Salansky discloses that the pockmarks and *Lupus Vulgaris* were successfully treated with red or ultraviolet light in the 19th century and that ultraviolet light has been used

for the treatment of *psoriasis*. The Examiner alleges (1) that the treatment for pockmarks is a symptom of *acne vulgaris*, and (2) that Salansky teaches that the treatment for pockmarks can be used as a treatment for *psoriasis*. Since *psoriasis* is a primary T cell mediated skin disorder, the Examiner concludes that it would be obvious to use the visible light treatment of Sigurdsson because it is also recognized as appropriate for *psoriasis*.

Regarding the Examiner's first allegation, pockmarks may have many different causes. In Salansky, the term pockmark is associated with *lupus vulgaris* and does not seem to indicate that it is associated with *acne vulgaris*. However, even if it was, Salansky teaches that pockmarks were treated with red and ultraviolet light. The present invention recites that 400nm-440nm wavelengths are used. This is visible light at the violet end of the visible range. Accordingly, Salansky fails to teach or suggest that light in the 400-440nm range may be used to treat pockmarks.

Regarding the Examiner's second allegation, Salansky teaches that there is an overlap in the known treatment of pockmarks and the known treatment of *psoriasis*, namely, each can be treated by ultraviolet light. However, only pockmarks and *lupus vulgaris* are treated by red light. Accordingly, Salansky discloses some differences between the treatment for pockmarks and the treatment for *psoriasis*. To generalize and state that the treatment for pockmarks is applicable to *psoriasis* is wrong. Salansky clearly states that only ultraviolet light is used to treat *psoriasis*.

Since *psoriasis* was treated solely by ultraviolet light in Salansky, there is no teaching or suggestion that *psoriasis* (a primary T cell mediated skin disorder) is treated using visible light. Accordingly, it is respectfully submitted that Sigurdsson and Salansky fail to teach or suggest treating a primary T cell mediated skin disorder with visible light.

Russell discloses a flexible illuminator for phototherapy. Russell underscores that it is only known to treat *psoriasis* with ultraviolet light (see col. 9, line 25).

In view of the above amendments and remarks, it is respectfully submitted that the prior art of record fails to teach or suggest treatment of a primary T cell mediated skin disorder. Accordingly, it is respectfully submitted that independent claims 1 and 15 are allowable over Sigurdsson, Salansky, and Russell.

Dependent claims 2-14, being dependent on independent claim 1, are deemed allowable for the same reasons expressed above with respect to independent claim 1.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

Respectfully submitted,

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